

**BOUNCING PET TOY**

**Technical Field**

5 This invention relates to a pet toy and, more particularly, to a pet toy which is flexible, has an irregular shape, and a hollow core causing it to bounce in an irregular fashion when thrown on the ground or the floor. The hollow core provides a passageway for attaching a pull rope and/or for receiving an edible food treat.

**Background Art**

10 Play toys for animals, and particularly dogs, have been available for years in various sizes and configurations, each designed to provide jaw exercise and to enhance the animals' interest in playing with the toy. Enhanced interest in the toy may occur by giving it a physical configuration which will bounce in odd directions when tossed onto the floor or ground. Also interest in a pet toy can be enhanced by providing food treats in the  
15 pet toy. Many pet toys provide one or both of these features with varying success. Examples of such toys are found in U.S. design patents Des. 234,789 and Des. 234,790 to Rosenberg, each entitled "Sounding Toy For Pet Animal", and U.S. design patent Des. 256,958 to Markham, entitled "Pet Toy". This latter pet toy is hollow and has an irregular outer  
20 configuration and provides substantial jaw exercise for the animal.

A further example of such prior art pet toys is U.S. Patent Re. 34,352 to Markham, entitled "Therapeutic Pet Toy". This pet toy has an irregular outer configuration and a central core extending therethrough. A series of longitudinally spaced peripheral grooves are provided which have  
25 inwardly projecting lips for cleaning the teeth of the animal. The hollow core facilitates deformation of the pet toy with the animal bites into the

grooves. The resistance of the pet toy to deformation provides exercise for the animal's jaw.

### **Disclosure of the Invention**

In accordance with this invention, a pet toy is provided for  
 5 entertaining an animal and providing jaw exercise. In one form of the  
 invention the pet toy has an elongated hollow body extending along a  
 longitudinal axis having first and second ends and a side wall of  
 substantially constant cross-section throughout. A first bulbous section has  
 a first opening defining a first inner diameter, the first bulbous section  
 10 forming the first end of the elongated body. A second bulbous section has  
 a second opening defining a second inner diameter, the second bulbous  
 section forming the second end of the elongated hollow body and spaced  
 from the first bulbous section. A center section is provided which extends  
 along the longitudinal axis between the first and second bulbous sections  
 15 and is connected at opposite ends to both sections. The first and second  
 openings form one continuous opening through the pet toy. The center  
 section surrounds a narrowed diameter opening portion which lies between  
 the first and second bulbous sections and has a third inner diameter. A  
 plurality of spaced ribs may extend around the periphery of the pet toy to  
 20 facilitate an animal gripping the pet toy with its teeth.

More particularly, at least one of the bulbous sections has an  
 opening having a diameter greater than the inner diameter of the center  
 section so that a knot of a pull rope extending through the center of the pet  
 toy will pass through the opening in the bulbous section but will not pass  
 25 through the center section. Also, edible food treats can be placed in the pet  
 toy through the opening(s) in the respective bulbous sections and the center  
 section.

In another form of the invention, an elongated hollow body extends along a longitudinal axis and has first and second ends and a central hollow core of a substantially constant diameter. The first bulbous section has a first outer diameter and a first wall thickness forming the first end of the elongated hollow body extending along said longitudinal axis. A second bulbous section has a second outer diameter and a second wall thickness forming the second end of the elongated hollow body and is spaced from said first bulbous section. A center section lies along the longitudinal axis between and is connected to the first bulbous section and the second bulbous section. The center section has a thin deformable side wall whose outer diameter is less than at least one of the first and second outer diameters and has a third thickness which is less than at least one of the first and second thicknesses.

Additional advantages of this invention will become apparent from the detailed description of this invention taken in conjunction with the accompanying drawings.

#### **Brief Description of the Drawings**

Figure 1 is a perspective view of one embodiment of the pet toy of this invention;

Figure 2 illustrates the irregular bouncing action of the pet toy when it is tossed on the ground;

Figure 3 is a longitudinal vertical section, taken along line 3-3 of Figure 1, showing the uniform cross-section of the pet toy and the relationship of the respective diameters of the bulbous sections and the center section;

Figure 4 is a vertical section, taken along line 4-4 of Figure 3;

Figure 5 is a vertical section, taken along line 5-5 of Figure 3;

Figure 6 is a longitudinal vertical section through the pet toy of this invention showing the insertion and use of a pull rope therewith;

Figure 7 is a longitudinal vertical section through the pet toy of this invention showing the insertion of an edible food treat therein;

5 Figure 8 is a fragmentary vertical section of the left end of the pet toy showing a jaw of an animal biting down on the pet toy so that the ribs of the pet toy engage the sides of the teeth and the gums of the animal;

Figure 9 is a fragmentary enlarged vertical section showing details of the engagement of the teeth and gums of the animal with the ribs; and

10 Figure 10 is a longitudinal vertical section of another embodiment of the pet toy of this invention.

### Best Mode For Carrying Out the Invention

As best seen in Figures 1 and 3, the pet toy 10 of this invention has an elongated body extending along axis 12 wherein the elongated body includes a first bulbous section 14 having first and second ends and a second bulbous section 16 having first and second ends and spaced from the first bulbous section 14. These bulbous sections are interconnected by a center section 18 which also has first and second ends. As clearly seen in Figure 3, the side wall 19 defines a cross-section which is substantially uniform throughout. This uniform cross-section facilitates the irregular bouncing action of the pet toy when tossed so that it bounces along an irregular path, such as path 20 shown in Figure 2. This creates interest in the pet toy by an animal such as dog 22. Conveniently, each bulbous section 14 and 16 has a plurality of spaced ribs 24 which form a groove 26 therebetween to facilitate an animal gripping the pet toy with its teeth. Conveniently, the animal can deform the pet toy by biting down on the bulbous sections.

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Ins a1

Ins a2 25

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Bulbous section 14 has an outer diameter and bulbous section 16 has a similarly sized outer diameter. In the embodiment shown, although the outer diameters are the same, it will be understood that one of ordinary skill in this art could construct a pet toy having bulbous sections of different diameters to modify the bouncing characteristics of the pet toy. The center section 18 has a third outer diameter which is less than at least one the first and second outer diameters. Center section 18 is positioned along longitudinal axis 12 between bulbous section 14 and bulbous section 16 and is connected to both.

Additionally, bulbous section 14 has an opening 28 at its first or outer end. This opening 28 defines a first inner diameter. Bulbous section 16 has an opening 30 at its first or outer end. This opening 30 defines a second inner diameter. The first and second inner diameters are greater than a third inner diameter of center section 18 which forms a surface which defines opening 32 therethrough.

This arrangement provides several advantages. First, as shown in Figure 6, when used with a pull rope 34 having a knot 36 at one end thereof, the knot is sized to be small enough to pass through an opening in a bulbous section, such as opening 28 in bulbous section 14, but is larger in diameter than the third inner diameter of opening 32 in center section 18. Accordingly, the knot engages the interior surface of center section 18 which serves as an anchor point for knot 36. The free end of rope 34 may then extend through opening 30 in bulbous section 16 so that it can serve as a pull rope. It is readily apparent that the direction of the rope can be reversed so that knot 36 passes through opening 30 of bulbous section 16 and bears against the opposite side of the interior surface of center section 18 as an anchor with the rope 34 passing through opening 28 in bulbous section 14. Furthermore, it will be understood that one of openings 28 and

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30 could be smaller in diameter than the diameter of knot 36 so long as the diameter of the other of bulbous sections 28 and 30 is larger than the diameter of the rope. In this instance, the rope could be inserted through the pet toy in only one direction.

5 A second advantage is that an edible pet treat 38, as shown in Figure 7, can be inserted through either opening 28 of bulbous section 14 or opening 30 of bulbous section 16 but is resiliently gripped by the interior surface of center section 18 defined by opening 32. Once the animal has chewed off the end of edible food treat 38, the remaining portion of the  
10 treat can be released by the animal chewing on the pet toy and deforming it so as to crush or dislodge edible food treat 38 from within opening 32. Thus, the interest of the animal in the pet toy of this invention can be maintained over an extended period of time because of the effort required to remove the entire edible treat from the pet toy.

15 Also, the edible treat can be longer than the length of the pet toy and extent out of both openings 28 and 30 while being resiliently held intermediate its ends by the interior surface defined by opening 32. After chewing off the ends of the treat, the remainder of the treat which is inside the pet toy will be released by the animal chewing on the pet toy to deform  
20 it so that the remainder of the treat is crushed and will fall out the ends of the pet toy. Alternatively, the treat can be shorter than the pet toy and positioned within it so that neither end is exposed. In order to remove any of treat in this instance, the animal must deform the pet toy by chewing on it to crush the treat so that it falls out of the ends of the pet toy.

25 By turning to Figures 8 and 9, another advantage of this invention can be seen. Conveniently, the ribs 24 function to clean the sides of the teeth of the animal when it bites down on bulbous section 14. ~~Teeth 40~~  
*Insr. a<sup>3</sup>* *a<sub>3</sub>* deflect area 42 on the opposite sides of side wall 19 inwardly so that ~~ribs 24~~  
*Insr. a<sup>4</sup>* *a<sub>4</sub>*

engage the opposite sides of tooth 40 thus effecting the cleaning action.

*Im. 25*  
The deflection of area 42 also allows the gums 43 to be massaged by ~~ribs~~ *as*  
~~24~~. The same cleaning and massaging action will occur when the animal bites down on bulbous section 16 as well.

5 Another embodiment is shown in Figure 10 wherein pet toy 10' includes bulbous sections 14' and 16' and center section 18' have a longitudinal center bore or opening 44 of substantially uniform cross-section. This pet toy will function similarly to that of Figures 1-7 except  
10 that bulbous sections 14' and 16' will be less easily deflected by the teeth of the animal. However, by changing the elasticity of the material from which the pet toy is made, it is possible to compensate for the greater thickness of the side wall 19' at bulbous sections 14' and 16'.

From the foregoing, the advantages of this invention are readily apparent. An elongated hollow pet toy has been provided which has spaced  
15 bulbous sections joined by a center section wherein the cross-section of the elongated body wall is substantially uniform throughout. This exterior configuration together with the hollow interior cause the pet toy to bounce in an irregular fashion when thrown on the floor or ground. The bulbous sections can have the same diameters or different diameters. In either case,  
20 an opening is provided in the end of each bulbous section and at least one such opening is of a greater diameter than that of the opening in the center section so as to provide an anchoring surface for the knot on a pull rope with the pull rope extending through the other of such openings or to resiliently hold an edible food treat which is inserted through one of the  
25 openings in the bulbous end sections. Peripheral ribs are spaced longitudinally along the bulbous sections of the pet toy to form grooves so that the animal can grasp the pet toy with its teeth. In one embodiment the pet toy has a thin wall of substantially constant cross-section which

enhances the bouncing characteristics of the pet toy. When the teeth of the animal bite down on the pet toy, the side walls deform so that the ribs deflect inwardly to clean the teeth and/or massage the gums. In a second embodiment, the pet toy has a hollow core of substantially uniform diameter.

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This invention has been described in detail with reference to particular embodiments thereof, but it will be understood that various other modifications can be effected within the spirit and scope of this invention.

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